

Please amend claims 1, 7, 9, 10, 13 and 14 as per attached with this Response and Amendment. Attachment A is a marked-up copy of the claim amendments, while Attachment B is a clean copy of the amended claims.

REMARKS

Upon entry of this amendment, claims 1, 3-7 and 9-14 are pending in the application. Claim 1 is an independent claim drawn to an apparatus for producing asphalt pellets with claims 3-6 depending therefrom, while claim 7 is an independent claim drawn to a method for producing asphalt pellets with claims 9-14 depending therefrom. Applicants submit that the amendments to the claims do not add new matter within the meaning of 35 U.S.C. §132 since the amendments to claims 1 and 7 incorporate the limitations of claims 2 and 8, respectively. Also, the change from "asphaltenes" to "asphalt" has been made in the claims because Applicants are of the opinion that the use of the word "asphalt" makes the claims clearer to one of skill in the art. The remaining claim amendments are to correct the dependency of the claims.

Claims 3-5 stand rejected as being indefinite. Claims 1-4, 6-9 and 11 stand rejected as being anticipated by Teppo; claims 1 and 7 stand rejected as being anticipated by Kontny et al.; and claims

1, 7 and 10 stand rejected as being anticipated by Wingerd. Further, claims 1-9, 11, 12 and 14 stand rejected as being obvious over Teppo and claims 1, 6, 7, 10 and 13 stand rejected as being obvious over Wingerd in view of Chalmers.

1. Rejection of Claims 3-5 Under
35 U.S.C. §112, Second Paragraph

Claims 3-5 stand rejected under 35 U.S.C. 112, second paragraph as being indefinite for the reasons set forth in the Office Action.

RESPONSE

Applicants respectfully traverse this rejection and request reconsideration and withdrawal thereof.

Applicants respectfully submit that the amendments to claim 1 overcome this rejection, rendering the rejection moot. Applicants have amended claim 1 to incorporate the limitations of claim 2, thus providing proper antecedent basis in claim 1 for the terminology listed in the Office Action. Thus, Applicants have overcome this rejection.

Accordingly, Applicant respectfully submits that claim 1 provides proper antecedent basis and claims 3-5, as such, are

definite. Applicant respectfully requests reconsideration and withdrawal of the rejection thereof as being indefinite.

2. Rejection of Claims 1-4, 6-9 and 11 Under 35 U.S.C. 102(b)

Claims 1-4, 6-9 and 11 stand rejected under 35 U.S.C. 102(b) as being anticipated by Teppo (U.S. Patent No. 4,931,231) for the reasons set forth in the Office Action.

RESPONSE

Applicant respectfully traverses this rejection and respectfully requests reconsideration and withdrawal thereof.

To establish an anticipation rejection, every claimed element must be found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. V. Union Oil Co. of California*, 814 F2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); See also, MPEP § 2131. Applicant respectfully submits that the Examiner has not met this burden.

As amended, independent claim 1 is drawn to an apparatus for producing asphalt pellets comprising: flow means that supplies hot asphalt through a conduit to its outlet; pellet producing means that breaks up the liquid stream of said hot asphalt exiting the outlet of said conduit and produces pellets of asphalt; a reservoir

or container that collects said pellets of asphalt together with some fluid producing a slurry; and transporting means that transports said slurry to the required location. Likewise, independent claim 7 is drawn to a method for producing asphalt pellets comprising the steps of: supplying hot asphalt through a conduit to its outlet; breaking up the liquid stream of said hot asphalt exiting the outlet of said conduit using a pellet producing medium to produce pellets of asphalt; collecting said pellets of asphalt in a reservoir together with some fluid producing a slurry; and transporting said slurry to a required location. Thus, in order for Teppo to anticipate claims 1 and 7 (and the claims that depend therefrom), Teppo must disclose all of the limitations set forth above. Applicant respectfully submits that Teppo fails to do so, and therefore does not anticipate the claims.

Applicant respectfully submits that Teppo discloses a method of and apparatus for manufacturing discrete solid particles of hydrocarbonaceous material in a relatively dustless form. The discrete solid particles are collected from the cooling water and conveyed to a drying and cooling zone.

However, Applicants respectfully submit that Teppo fails to disclose the limitation of forming **a slurry** with the pelletized asphalt and water, and transporting **the slurry** to a desired

location. As is seen in the independent claims, it is an important limitation that **a slurry** be produced by the pellets and a liquid, with the **slurry** being transported. The production of the **slurry** is important in that it eases the burden of the transporting means, i.e., transporting the **slurry** is easier than transporting the asphalt pellets themselves.

Applicants respectfully submit that Teppo fails to disclose the transportation of the **slurry**. Applicant directs the Examiner's attention to the Abstract of the patent, as well as column 3, lines 27-32, in which the **solidified hydrocarbonaceous material is conveyed out of the cooling reservoir to a cooling and drying station**. Thus, Teppo does not disclose the formation of a slurry, nor the transportation thereof.

Accordingly, Applicant respectfully submits that Teppo does not disclose all of the limitations of claims 1 and 7 (and therefore, of the dependent claims, which contains all of the limitations of claims 1 and 7, respectively), and does not anticipate the claims. Applicant respectfully requests reconsideration and withdrawal of the rejection.

3. Rejection of Claims 1 and 7 Under 35 U.S.C. 102(b)

Claims 1 and 7 stand rejected under 35 U.S.C. 102(b) as being

anticipated by Kontny et al. (U.S. Patent No. 4,052,492) for the reasons set forth in the Office Action.

RESPONSE

Applicant respectfully traverses this rejection and respectfully requests reconsideration and withdrawal thereof.

To establish an anticipation rejection, every claimed element must be found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. V. Union Oil Co. of California*, 814 F2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); See also, MPEP § 2131. Applicant respectfully submits that the Examiner has not met this burden.

As amended, independent claim 1 is drawn to an apparatus for producing asphalt pellets comprising: flow means that supplies hot asphalt through a conduit to its outlet; pellet producing means that breaks up the liquid stream of said hot asphalt exiting the outlet of said conduit and produces pellets of asphalt; a reservoir or container that collects said pellets of asphalt together with some fluid producing a slurry; and transporting means that transports said slurry to the required location. Likewise, independent claim 7 is drawn to a method for producing asphalt pellets comprising the steps of: supplying hot asphalt through a

conduit to its outlet; breaking up the liquid stream of said hot asphalt exiting the outlet of said conduit using a pellet producing medium to produce pellets of asphalt; collecting said pellets of asphalt in a reservoir together with some fluid producing a slurry; and transporting said slurry to a required location. Thus, in order for Kontny et al. to anticipate claims 1 and 7, Kontny et al. must disclose all of the limitations set forth above. Applicant respectfully submits that Kontny et al. fails to do so, and therefore does not anticipate the claims.

Applicant respectfully submits that Kontny et al. discloses a method of impregnating substantial amounts of asphalt into fiberboard. The apparatus disclosed in Kontny et al. produces **atomized particles of asphalt**, which are then impregnated on the fiberboard.

Applicants respectfully submit that there is a fundamental difference between **atomized particles of asphalt** and **pellets of asphalt**, namely the size of the particles. **Atomized particles** are very small, thus requiring specialized equipment in order to produce the atomized particles. **Pellets**, on the other hand, are larger than atomized particles, and the production of asphalt pellets does not require as much specialized equipment (like the atomizing nozzle 24 of Kontny et al.). Thus, Applicants

respectfully submit that it is improper for the Examiner to equate **atomized particles of asphalt with asphalt pellets**, especially given that the size differential between the particle sizes is so large.

That being said, Applicants respectfully submit that Kontny et al. fails to disclose the production of **pellets of asphalt**, as is required by the instant claims. Moreover, the production of pellets simplifies the process over the process of Kontny et al., which requires the atomization of the asphalt. Thus, Applicants respectfully submit that Kontny et al. fails to disclose each and every limitation of claims 1 and 7, and therefore does not anticipate the claims.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection.

4. Rejection of Claims 1 and 7 Under 35 U.S.C. 102(b)

Claims 1, 7 and 10 stand rejected under 35 U.S.C. 102(b) as being anticipated by Wingred (U.S. Patent No. 3,197,413) for the reasons set forth in the Office Action.

RESPONSE

Applicant respectfully traverses this rejection and

respectfully requests reconsideration and withdrawal thereof.

To establish an anticipation rejection, every claimed element must be found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. V. Union Oil Co. of California*, 814 F2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); See also, MPEP § 2131. Applicant respectfully submits that the Examiner has not met this burden.

As amended, independent claim 1 is drawn to an apparatus for producing asphalt pellets comprising: flow means that supplies hot asphalt through a conduit to its outlet; pellet producing means that breaks up the liquid stream of said hot asphalt exiting the outlet of said conduit and produces pellets of asphalt; a reservoir or container that collects said pellets of asphalt together with some fluid producing a slurry; and transporting means that transports said slurry to the required location. Likewise, independent claim 7 is drawn to a method for producing asphalt pellets comprising the steps of: supplying hot asphalt through a conduit to its outlet; breaking up the liquid stream of said hot asphalt exiting the outlet of said conduit using a pellet producing medium to produce pellets of asphalt; collecting said pellets of asphalt in a reservoir together with some fluid producing a slurry; and transporting said slurry to a required location. Thus, in

order for Wingred to anticipate claims 1 and 7, Wingred must disclose all of the limitations set forth above. Applicant respectfully submits that Wingred fails to do so, and therefore does not anticipate the claims.

Applicant respectfully submits that Wingred discloses a method for **atomizing asphalt**. The apparatus disclosed in Wingred produces **atomized particles of asphalt** using an efficient atomizing nozzle where the melted fluid asphalt is **atomized through the nozzle** into a collecting bin (column 2, lines 10-13).

As is discussed above with respect to Kontny et al., Applicants respectfully submit that there is a fundamental difference between **atomized particles of asphalt** and **pellets of asphalt**, namely the size of the particles. **Atomized particles** are very small, thus requiring specialized equipment in order to produce the atomized particles. **Pellets**, on the other hand, are larger than atomized particles, and the production of asphalt pellets does not require as much specialized equipment (like the atomizing nozzle of Wingred). Thus, Applicants respectfully submit that it is improper for the Examiner to equate **atomized particles of asphalt with asphalt pellets**, especially given that the size differential between the particle sizes is so large.

That being said, Applicants respectfully submit that Wingred

fails to disclose the production of **pellets of asphalt**, as is required by the instant claims. Moreover, the production of pellets simplifies the process over the process of Wingred, which requires the atomization of the asphalt. Thus, Applicants respectfully submit that Wingred fails to disclose each and every limitation of claims 1, 7 and 10, and therefore does not anticipate the claims.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection.

5. Rejection of Claims 1-9, 11 and 14 Under 35 U.S.C. 103(a)

Claims 1-9, 11 and 14 stand rejected under 35 U.S.C. 103(a) as being obvious over Teppo (U.S. Patent No. 4,931,231) for the reasons set forth in the Office Action.

RESPONSE

Applicant respectfully traverses this rejection and requests reconsideration and withdrawal thereof.

The reference of record, Teppo, does not teach or suggest Applicants' inventive subject matter as a whole, as recited in the amended claims. Further, there is no teaching or suggestion in this reference which would lead the ordinary skilled artisan to

modify the reference to derive the subject matter as defined in the amended claims.

The U.S. Supreme Court in *Graham v. John Deere Co.*, 148 U.S.P.Q. 459 (1966) held that non-obviousness was determined under § 103 by (1) determining the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims at issue; (3) resolving the level of ordinary skill in the art; and, (4) inquiring as to any objective evidence of nonobviousness.

A. The present inventive subject matter

As amended, independent claim 1 is drawn to an apparatus for producing asphalt pellets comprising: flow means that supplies hot asphalt through a conduit to its outlet; pellet producing means that breaks up the liquid stream of said hot asphalt exiting the outlet of said conduit and produces pellets of asphalt; a reservoir or container that collects said pellets of asphalt together with some fluid producing a slurry; and transporting means that transports said slurry to the required location. Likewise, independent claim 7 is drawn to a method for producing asphalt pellets comprising the steps of: supplying hot asphalt through a conduit to its outlet; breaking up the liquid stream of said hot

asphalt exiting the outlet of said conduit using a pellet producing medium to produce pellets of asphalt; collecting said pellets of asphalt in a reservoir together with some fluid producing a slurry; and transporting said slurry to a required location.

The remaining claims depend from claim 1 or claim 7, and therefore contain all of the limitations found in the respective claims.

B. The References

Applicant respectfully submits that Teppo discloses a method of and apparatus for manufacturing discrete solid particles of hydrocarbonaceous material in a relatively dustless form. The discrete solid particles are collected from the cooling water and conveyed to a drying and cooling zone.

C. Differences between claimed invention and references

The differences between applicant's inventive subject matter and the cited references are readily apparent from their independent and distinct disclosures and claims. As is discussed above with respect to the anticipation rejection, which is hereby incorporated, Applicants respectfully submit that Teppo fails to disclose the limitation of forming **a slurry** with the pelletized

asphalt and water, and transporting **the slurry** to a desired location. As is seen in the independent claims, it is an important limitation that **a slurry** be produced by the pellets and a liquid, with the **slurry** being transported. The production of the **slurry** is important in that it eases the burden of the transporting means, i.e., transporting the **slurry** is easier than transporting the asphalt pellets themselves.

Applicants respectfully submit that Teppo fails to disclose the transportation of the **slurry**. Applicant directs the Examiner's attention to the Abstract of the patent, as well as column 3, lines 27-32, in which the **solidified hydrocarbonaceous material is conveyed out of the cooling reservoir to a cooling and drying station**. Thus, Teppo does not disclose the formation of a slurry, nor the transportation thereof. Since Teppo fails to disclose the limitations of the independent claims, Applicants respectfully submit that Teppo also fails to disclose the limitations of the dependent claims.

Applicants respectfully request reconsideration and withdrawal of the rejection of the claims as being obvious over Teppo.

6. Rejection of Claims 1, 6, 7, 10 and 13 Under 35 U.S.C. 103(a)

Claims 1, 6, 7, 10 and 13 stand rejected under 35 U.S.C.

103(a) as being obvious over Wingred (U.S. Patent No. 3,197,413) in view of Chalmers (U.S. Patent No. 4,024,210) for the reasons set forth in the Office Action.

RESPONSE

Applicant respectfully traverses this rejection and requests reconsideration and withdrawal thereof.

The references of record, Wingred and Chalmers, do not teach or suggest Applicants' inventive subject matter as a whole, as recited in the amended claims. Further, there is no teaching or suggestion in these references which would lead the ordinary skilled artisan to modify the references to derive the subject matter as defined in the amended claims.

The U.S. Supreme Court in *Graham v. John Deere Co.*, 148 U.S.P.Q. 459 (1966) held that non-obviousness was determined under § 103 by (1) determining the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims at issue; (3) resolving the level of ordinary skill in the art; and, (4) inquiring as to any objective evidence of nonobviousness.

A. The present inventive subject matter

As amended, independent claim 1 is drawn to an apparatus for producing asphalt pellets comprising: flow means that supplies hot asphalt through a conduit to its outlet; pellet producing means that breaks up the liquid stream of said hot asphalt exiting the outlet of said conduit and produces pellets of asphalt; a reservoir or container that collects said pellets of asphalt together with some fluid producing a slurry; and transporting means that transports said slurry to the required location. Likewise, independent claim 7 is drawn to a method for producing asphalt pellets comprising the steps of: supplying hot asphalt through a conduit to its outlet; breaking up the liquid stream of said hot asphalt exiting the outlet of said conduit using a pellet producing medium to produce pellets of asphalt; collecting said pellets of asphalt in a reservoir together with some fluid producing a slurry; and transporting said slurry to a required location.

The remaining claims depend from claim 1 or claim 7, and therefore contain all of the limitations found in the respective claims.

B. The References

Applicant respectfully submits that Wingred discloses a method

for **atomizing asphalt**. The apparatus disclosed in Wingred produces **atomized particles of asphalt** using an efficient atomizing nozzle where the melted fluid asphalt is **atomized through the nozzle** into a collecting bin (column 2, lines 10-13).

Likewise, Chalmers discloses the formation of **sulfur** pellets from molten **sulfur** using a gun and pelletizing chamber. **Sulfur** is ejected from a gun in a form of a thin sheet and dispersed and solidified into solid pellets with a water jet.

C. Differences between claimed invention and references

The differences between applicant's inventive subject matter and the cited references are readily apparent from their independent and distinct disclosures and claims. As is discussed above with respect to the anticipation rejection, which is hereby incorporated, Applicants respectfully submit that there is a fundamental difference between **atomized particles of asphalt** and **pellets of asphalt**, namely the size of the particles. **Atomized particles** are very small, thus requiring specialized equipment in order to produce the atomized particles. **Pellets**, on the other hand, are larger than atomized particles, and the production of asphalt pellets does not require as much specialized equipment (like the atomizing nozzle of Wingred). Thus, Applicants

respectfully submit that it is improper for the Examiner to equate **atomized particles of asphalt with asphalt pellets**, especially given that the size differential between the particle sizes is so large.

That being said, Applicants respectfully submit that Wingred fails to disclose the production of **pellets of asphalt**, as is required by the instant claims. Moreover, Chalmers also fails to discuss the production of pellets of **asphalt**. While it is true that Chalmers discusses the production of pellets of **sulfur**, Applicants respectfully submit that one of ordinary skill in the art of asphalt or asphaltenes **would not** equate the production of sulfur pellets with the production of asphalt pellets. Thus, there would be no motivation to combine the references in order to attempt to obtain the presently claimed subject matter. In other words, one who is concerned with the **atomization of asphalt** would **not** be inclined to look to the **pelletization of sulfur** for combining technology.

Accordingly, Applicants respectfully submit that there is no motivation or teaching in the references to combine them to attempt to obtain the presently claimed subject matter. As such, Applicants respectfully request reconsideration and withdrawal of the rejection of the claims as being obvious over the references.

CONCLUSION

In view of the foregoing, applicants respectfully request the Examiner to reconsider and withdraw the all pending rejections, and to allow all of the claims pending in this application.

If the Examiner has any questions or comments regarding this matter, he is welcomed to contact the undersigned attorney at the below-listed number and address.

Respectfully submitted,

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For: **METHOD OF AND APPARATUS FOR PRODUCING PELLETS FORM
HEAVY HYDROCARBON LIQUID**

ATTACHMENT A - MARKED-UP COPY OF CLAIM AMENDMENTS

Please cancel claims 2 and 8 without prejudice or disclaimer to the subject matter contained therein.

Please amend claims 1, 7, 9, 10, 13 and 14 as follows:

1. (Amended) Apparatus for producing [asphaltene] asphalt pellets comprising:

a) flow means that supplies hot [asphaltene] asphalt through a conduit to its outlet; [and]

b) pellet producing means that breaks up the liquid stream of said hot [asphaltene] asphalt exiting the outlet of said conduit and produces pellets of [asphaltene] asphalt;

c) a reservoir or container that collects said pellets of asphalt together with some fluid producing a slurry; and

d) transporting means that transports said slurry to the required location.

7. (Amended) A method for producing [asphaltene] asphalt pellets comprising the steps of:

a) supplying hot [asphaltene] asphalt through a conduit to its outlet; [and]

b) breaking up the liquid stream of said hot [asphaltene] asphalt exiting the outlet of said conduit using a pellet producing medium to produce pellets of [asphaltene] asphalt;

c) collecting said pellets of asphalt in a reservoir

together with some fluid producing a slurry; and
d) transporting said slurry to a required location.

9. (Amended) A method according to claim [8] 7 wherein the step of collecting said pellets of [asphaltene] asphalt in a reservoir together with some fluid producing a slurry is carried out by collecting said pellets of [asphaltene] asphalt in a reservoir together with some liquid water producing a heavy hydrocarbon or [asphaltene] asphalt-water slurry.

10. (Amended) A method according to claim 7 wherein said step of breaking up the liquid stream of hot [asphaltene] asphalt flowing out of the outlet of said conduit using a pellet producing medium so that pellets of [asphaltene] asphalt are produced is carried out by spraying a fluid so that the fluid contacts the [asphaltene] asphalt exiting said outlet of the conduit and pellets of [asphaltene] asphalt are produced.

13. (Amended) A method according to claim 10 wherein the step of spraying a fluid so that the fluid contacts the [asphaltene] asphalt exiting said outlet of the conduit and pellets of [asphaltene] asphalt are produced is carried out by spraying liquid water.

14. (Amended) A method according to claim [8] 7 including grinding said [asphaltene] asphalt pellets and transporting the grinded [asphaltene] asphalt pellets to a location.